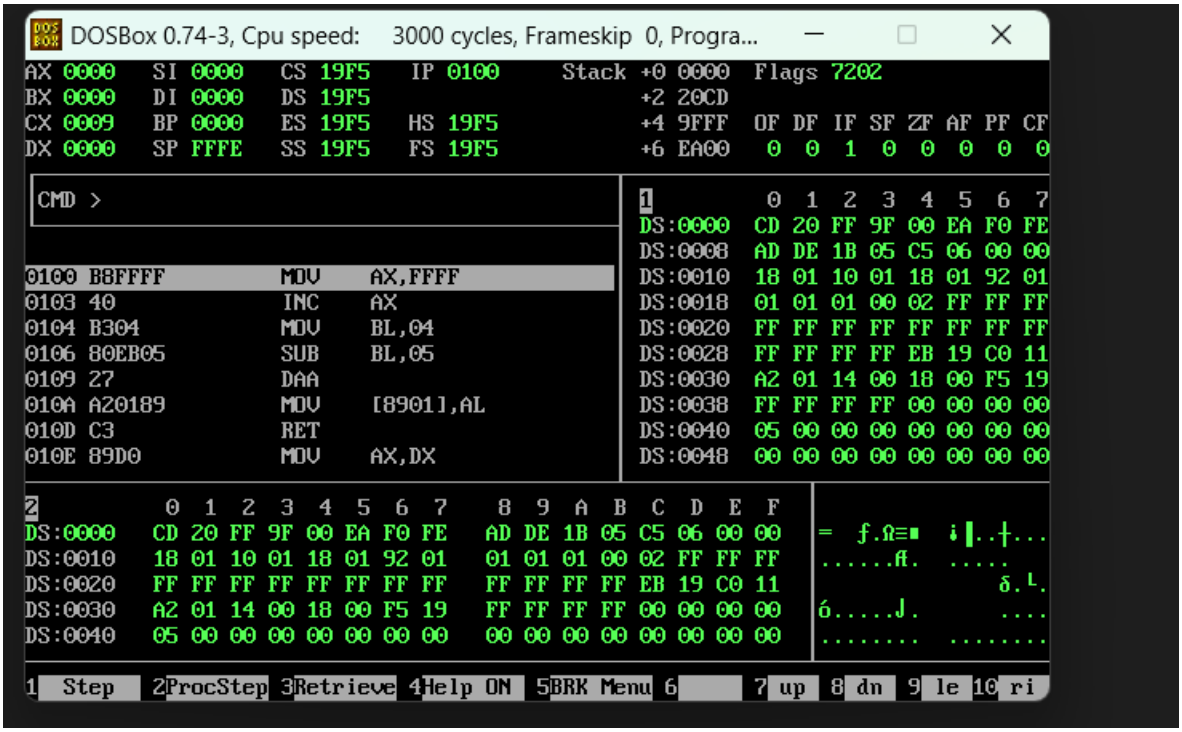
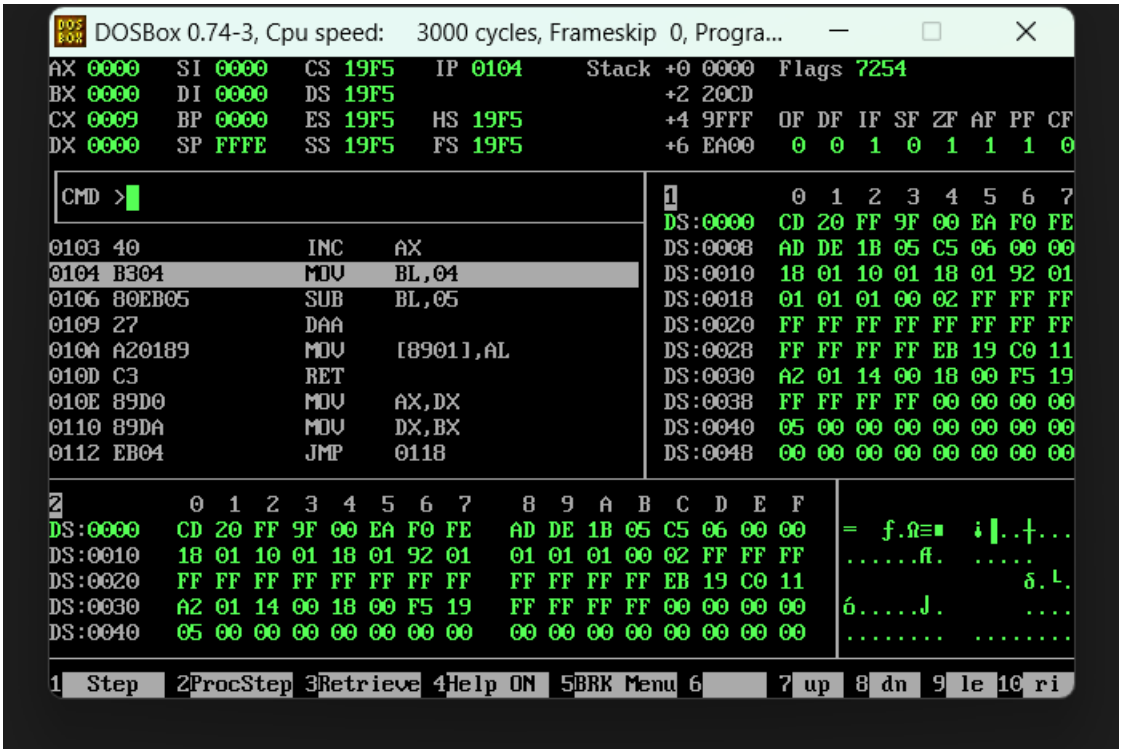
➔ This is the debug to check for flags that sir told:

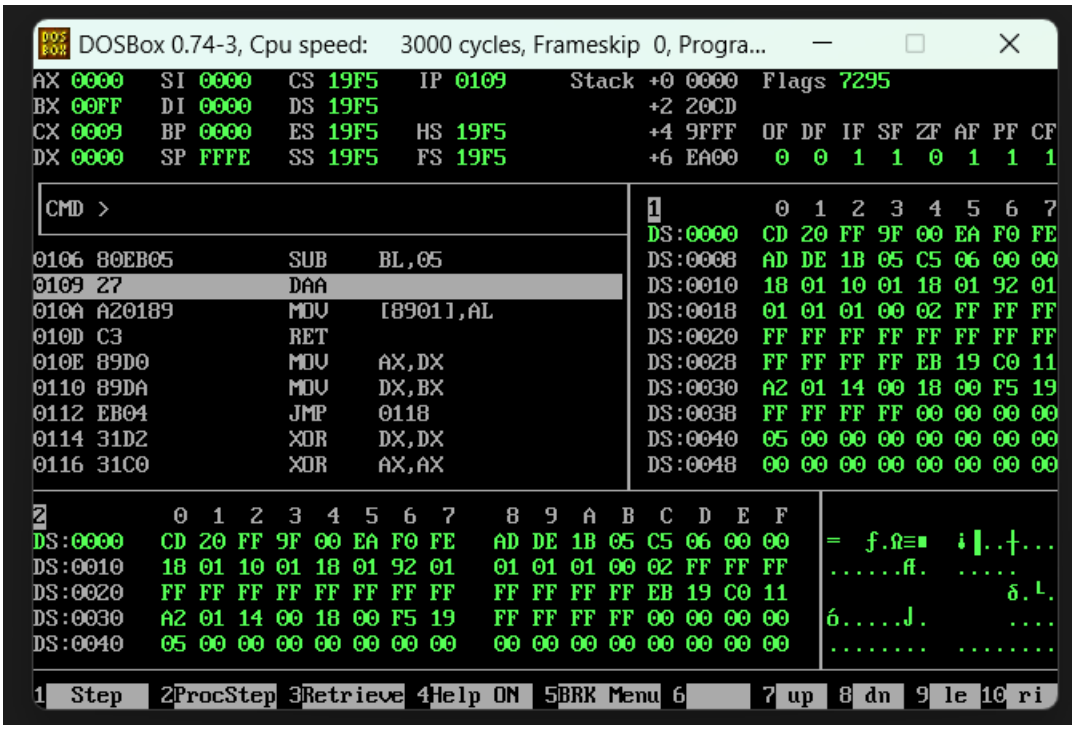
```
mov ax, 0FFFFh

; Flag is 0000 0010 0000 0010

; Carry is 0

; Parity is 0

; Sign is 0

; Zero is 0

; Auxillary is 0

; Overflow is 0

inc ax

; Flag is 0000 0010 0101 0110

; Carry is 0

; Parity is 1

; Sign is 0

; Zero is 1

; Auxillary is 1

; Overflow is 0

mov bl, 4

; Flag is 0000 0010 0101 0110

; Carry is 0

; Parity is 1

; Sign is 0

; Zero is 1

; Auxillary is 1

; Overflow is 0

sub bl, 5

; Flag is 0000 0010 1001 0111

; Carry is 1

; Parity is 1

; Sign is 1
```

```
; Zero is 0

; Auxillary is 1

; Overflow is 0
```





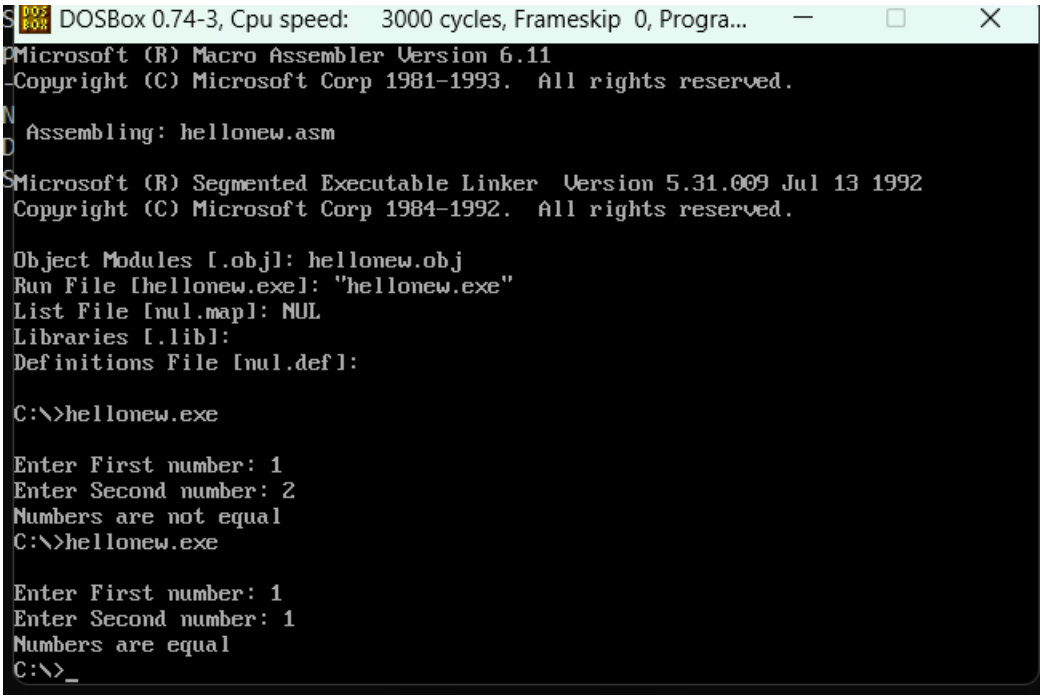
22i-1552_SYED_ARHAM_AHMED_COAL_LAB#5_BS-CY-B



Q.1.

```
.model small

.stack 100h
.data
msg1 db 10,13, "Enter First number: $"
msg2 db 10,13, "Enter Second number: $"
msg3 db 10,13, "Numbers are equal $"
msg4 db 10,13, "Numbers are not equal $"
.code
main proc
mov ax, @data
mov ds, ax
; Display message to enter the first number
mov dx, offset msg1
mov ah, 09h
int 21h
; Read the first number
mov ah, 01h
;Function to read a character from STDIN
int 21h
; Call DOS interrupt
sub al, 30h
; Convert ASCII to numeric value
mov cl, al
; Store the first number
; Display message to enter the second number
mov dx, offset msg2
mov ah, 09h
int 21h
; Read the second number
mov ah, 01h
; Function to read a character from STDIN
int 21h
; Call DOS interrupt
sub al, 30h
; Convert ASCII to numeric value
mov dl, al
; Store the second number
; Compare the two numbers
cmp dl, cl
je equal
; If equal, jump to label1
; If not equal, print the message
mov dx, offset msg4
mov ah, 09h
int 21h
jmp end_prog
equal:
; If equal, print the message
mov dx, offset msg3
mov ah, 09h
int 21h
 end_prog:
 mov ah,76
int 33
main endp
```

```
end main
```



Q.2.

```
dosseg

.model small

.stack 100h

.data

array db 10 Dup(?)

.code

main proc

mov ax, @data

mov ds, ax

mov si, offset array

mov cx, 10

; loop

mov al,48

l1:
mov [si],al
mov dx, [si]
```

```
mov ah,2

int 21h

;mov dx, [si+1]

inc si
inc al
loop l1

mov ah, 4ch

int 21h

main endp

end main
```

```
C:\>hellonew.exe
0123456789
C:\>
```

Q.3.

```
dosseg

.model small

.stack 100h

.data

array db 10 Dup(?)

.code

main proc

mov ax, @data

mov ds, ax

mov si, offset array

mov cx, 26

; loop

mov al,97

l1:
mov [si],al
mov dx, [si]


mov ah,2

int 21h
```

```
;mov dx, [si+1]

inc si
inc al
loop l1

mov ah, 4ch

int 21h

main endp

end main
```

```
C:\>hellonew.exe
abcdefghijklmnopqrstuvwxyz
C:\>
```

Q.4.

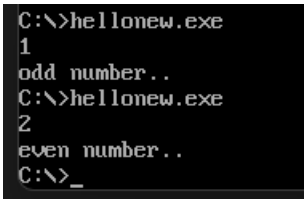
```
dosseg

.model small

.stack 100h

.data

array db 10 Dup(?)

.code

main proc

mov ax, @data

mov ds, ax

mov si, offset array

mov cx, 26

; loop

mov al,65

l1:
mov [si],al
mov dx, [si]


mov ah,2

int 21h

;mov dx, [si+1]

inc si
```

```
inc al
loop l1

mov ah, 4ch

int 21h

main endp

end main
```

```
C:\>hellonew.exe
ABCDEFGHIJKLMNOPQRSTUVWXYZ
C:\>
```

Q.5.

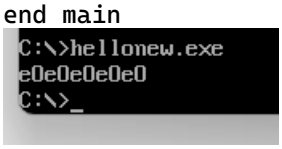
```
dosseg
.model small
.stack 100h
.data
      var1 db 10,13,'even number..$'
      var2 db 10,13,'odd number..$'
.code
      main proc

            mov ax,@data
            mov ds,ax

            mov ah,1
            int 21h
            mov bl,2

            div bl
            cmp ah,0 ;this si the remainder cehck wether it os 0 or not
            je l1 ;then jump to l1
            mov dx,offset var2 ;else print odd number
            mov ah,9
            int 21h
            jmp exit ;exit

            l1:

            mov dx,offset var1
            mov ah,9
            int 21h
            exit:

            mov ah,4ch
            int 21h


      main endp
end main
```



Q.6.

```
dosseg

.model small

.stack 100h

.data
array db 0,1,2,3,4,5,6,7,8,9
result db 10 Dup(?)

.code

main proc
    mov ax, @data
    mov ds, ax

    mov si, offset array
    mov di, offset result

    mov cx, 10


    l1:
        mov al, [si]
        mov bl,2
        div bl

             cmp ah,0
        ;test ah,ah
        je evenNumber
        mov byte ptr [di],79
        jmp nextElement

    evenNumber:
        mov byte ptr [di], 101

    nextElement:
        inc si
        inc di
        loop l1

    mov si, offset result
    mov cx, 10

    l2:
    mov dl, [si]
    mov ah, 02h
    int 21h
    inc si
```

```
    loop l2 ;


    mov ah, 4ch
    int 21h

main endp

end main
```



Q.7.

```
dosseg

.model small

.stack 100h

.data
array db 2,1,2,1,2
result db 0

.code

main proc
    mov ax, @data
    mov ds, ax

    mov si, offset array

    mov cx, 5
    mov ax,0
    mov bl,0

    l1:
        mov al, [si]


        add bl,al


        inc si

        loop l1


   mov dl,bl

   add dl,48
   mov result,dl
   mov ah,02h
   int 21h
```

```
    mov ah, 4ch
    int 21h

main endp

end main
```